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ABSTRACT

The College Discovery Prefreshman Summer Program (CDPSP) at New York's Bronx Community College is a 6-week summer bridge program providing minority and low-income students with career counseling, study skills, and intensive instruction in English, reading, and mathematics. To determine the effects of the program on participants' academic, personal, and social development, a study was undertaken of the 52 students enrolled in the 1993 CDPSP. Academic outcomes were tracked through the students' first 2 semesters and questionnaires were mailed in February 1994 to gather data on students' attitudes regarding the program. An analysis of academic records and survey responses received from 44 students indicated the following: (1) participants were 65% female, 48% African-American, 44% Hispanic, and 8% Asian; (2) with respect to fulfillment of participants' academic and non-academic goals, African-Americans gave the highest and Asians gave the lowest ratings; (3) with respect to the preparation received from the CDPSP, participants gave classroom preparation a mean rating of 2.2 out of 3, while attitudinal preparation received a mean rating of 2.3; (4) during the CDPSP, participants' mean grade point average (GPA) was 2.64, while for fall 1993-94 it fell slightly to 2.3 and for spring 1994 it rose to 2.37; and (5) 93% of the CDPSP students persisted into their third semester. Data tables are appended. (TGI)

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The Benefits of College Discovery Prefreshman Summer Program For Minority And Low Income Students

by

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SUMMARY

The study sought to determine the effects of a summer bridge program on the academic, personal, and social development of minority and low-income students during their first year at Bronx Community College of the City University of New York. The 1993 cohort of students enrolled in the College Discovery Prefreshman Summer Program (CDPSP) were tracked through their first two semesters, collecting both attitudinal and academic data. CDPSP is a 6-week program with a curricular component involving intensive English Composition, Reading, and Math courses. The counseling component consists of Orientation and Career Development seminars addressing the study skills need and career direction of the students. Data from 44 students suggest that CDPSP can help facilitate students' transition and adjustment to college life and improve their academic performance and persistence rates. CDPSP has proven that strong curricular and counseling components can help teach students how to participate and succeed in an academic environment. The program can also help minority and low-income students adjust and adapt to college life and help them become members of the campus community.

THE BENEFITS OF COLLEGE DISCOVERY PREFRESHMAN
SUMMER PROGRAM FOR MINORITY AND LOW-INCOME STUDENTS

Introduction and Literature Review

College summer bridge programs or transitional programs for high-risk, low-income and minority students are becoming an established part of the effort to recruit, retain, and graduate a population of high-risk students in higher education. Research and evaluation of these programs are less common, even though universities and colleges are spending enormous funds and human resources to ensure high participation and success.

Research investigations of summer bridge programs come mainly from authors working in the University of California and in the City University of New York.

Meyers and Drevlow (1982) reported on the results of participation of 30 high-risk, minority group, low-income students in a Summer bridge program at the University of California, San Diego. The program provided 3 weeks of intensive instruction in mathematics, reading, writing, and study skills. The students participated in group peer counseling and met with a counseling psychologist twice weekly to solve group problems and attended meetings about academic support services. Summer bridge students had the highest retention among four comparison groups, exceeding by 31 percent the rate of a comparable group of minority, low-income students. Ackermann (1991a; 1991b) investigated the effect of summer bridge programs on students enrolled at the University of California, Los Angeles. These are six-week programs with a curricular component involving either an intensive mathematics course or English composition/general education course. In both reports, the data suggest that the summer bridge programs

can help facilitate students' transition and adjustment to university life and improve their academic performance and persistence rates.

Tan (1985) evaluated the effect of the SEEK Prefreshman Summer Program at Baruch College in the City University of New York. The program, held for six weeks during the summer prior to college, provided skills remediation, counseling, and financial aid to freshmen from educationally and economically disadvantaged backgrounds. The investigator found that program participants who advanced after completing a summer remedial course continued to show adequate academic performance during their first semester. However, participants' academic performance in their first two semesters did not differ greatly from that of non-participants and proportionately fewer program participants than non-participants re-enrolled in the second semester. Bengis et al. (1986; 1991) conducted a wide-ranging study of the Prefreshman summer program across several units of the City University of New York. The investigator reports a higher completion rates in all remedial courses taken and concludes that the program made a significant contribution in preparing students for more advanced college-level courses. Santa Rita and Bacote (1991) conducted a study on a group of 36 students participating in a summer program at Bronx Community College in the City University of New York. The investigators found that summer program participants registered statistically significant higher persistence rates in their first two terms than all entering freshmen and that the mean grade point average of CDPSP and non-CDPSP students rose with time, suggesting that more academically proficient students tended to persist, or that GPA tended to rise for students who continued.

Purpose of the Study

The study was undertaken to determine the effects of a summer bridge program on the academic, personal, and social development of minority and low-income students during their first year at Bronx Community College (BCC). Research covered in this paper is based on an on-going longitudinal evaluation designed to determine the successes and failures of BCC's College Discovery Prefreshman Summer Program (CDPSP).

CDPSP was designed to increase the academic achievement, retention, and graduation of minority and low-income students. The goals and objectives of the programs are:

- o To facilitate entering students' transition from high school to BCC;
- o To increase the potential for the persistence, retention, and graduation of CDPSP students by introducing the academic demands of college life, the social, political, and cultural context of college life, and college structure, resources, and services;
- o To facilitate the development of critical thinking, academic skills, and personal and social responsibility;
- o To introduce retention services to CDPSP students, including counseling, learning skills and tutoring;
- o To build and reinforce the positive self-image, inner confidence and self direction of CDPSP students.

CDPSP is a six-week intensive program designed to bring students already accepted for admissions to BCC onto campus prior to their first semester of study at BCC. The academic component of CDPSP includes a) an English composition intensive, b) a reading comprehension intensive, and

c) a mathematics intensive. The counseling component consists of Orientation and Career Development seminars addressing the study skills need and career direction of the students. Fifty-two students attended the CDPSP program in the summer of 1993.

Study Design

To understand how the 1993 CDPSP students adjusted to the academic, social, and cultural demands of college life, this cohort of students were tracked through their first two semesters at BCC, collecting both attitudinal and academic data. Attitudinal data was collected using the CDPSP questionnaire (Santa Rita, 1991). This questionnaire was designed to give students an opportunity to assess the extent to which the goals and objectives of the program were met, in light of their experiences at BCC. In addition, the questionnaire asked students to rate the quality and availability of various campus services and to indicate whether or not they used the services.

The CDPSP questionnaire was designed as a close-ended, mail questionnaire. The questionnaire was constructed as a series of five-point Likert items. From these items, subscales were created and renamed to reflect their content more accurately. Only those scales that had an Internal Consistency Alpha Coefficient of .70 or above were considered for analysis

The questionnaire was piloted between December, 1993 and January, 1994. The initial mailing to all 1993 CDPSP students occurred during the third-week of February, 1994, with the follow-up mailing occurring during the second week of March, 1994. Of the 52 questionnaires, 44 were returned indicating a response rate of 84%.

Chi-square tests of significance were computed to determine whether or not there were differences between the type of student who completed and returned the questionnaire and the type of student who did not. The results indicated that no differences were found between CDPSP respondents and non-respondents in the areas of gender ($p=.313$) and ethnicity ($p=.167$).

Students' summer, fall, and spring grades, along with the number of credits attempted and completed and declared major were obtained from BCC's Office of the Registrar.

Findings

Population Demographics

Demographic information obtained on the 1993 cohort of CDPSP students revealed that 65% were female and 35% were male. The ethnic breakdown was 48% Black, 44% Hispanic, 8% Asian. During the fall semester of the 1993-1994 academic year, 56% of the students reported working in paid positions on-campus and 21% reported working in paid positions off-campus. All commuted to campus and 74% stated that they spent time every week taking care of family responsibilities. Twenty-seven percent (27%) participated in student clubs or activities and 37% reported participating in recreational sports activities. Almost one-hundred percent (93%) of the CDPSP students had taken four courses in the fall term.

And, when asked about their major area of study, the largest percentage of students, 53%, had yet to declare a major by the fall semester. Twenty-one percent of the students declared a major in Nursing, 15% in medical technology, 7% in computer science. Four percent declared

majors in education.

Goals and Objectives of CDPSP

From the goals and objectives section of the questionnaire, two sub-scales were created -- an Academic Goals/Objectives Scale, and a Non-Academic Goals/Objectives Scale. The first referred to the extent to which the academic goals and objectives of CDPSP were accomplished (aiding in their academic adjustment to BCC and increasing their control over their academic future); the Non-Academic Goals/Objective Scale referred to the extent to which the non-academic goals and objectives of CDPSP were accomplished (increasing their self-confidence and aiding in their social and cultural adjustment to BCC). The Internal Consistency Alphas for the two scales were .78 and are believed to be reasonable. Both scales ranged from one to five, with "1" representing a low rating, "3" representing a moderate or average rating, and "5" representing a high rating.

Figure 1 presents the results of the students' ratings on the Academic and Non-Academic Goals/Objective Scales, by ethnicity, showed African-American students gave fulfillment of the academic goals/objectives the highest ratings (3.9), while the Asian students gave the scale lowest ratings (3.5). While the fulfillment of the non-academic goals/objectives were given higher ratings compared to the academic goals/objectives, ratings were still in the "moderate" range. Again, African-American students rated the fulfillment of the non-academic goals/objectives, such as increasing their self-confidence and aiding in their social and cultural adjustment to BCC, the highest (4.0), while Asian students rated it the lowest (3.4). For the total population of students (N=44), the mean rating for the fulfillment of the non-academic

goals/objectives was higher than the mean rating for the fulfillment of the academic goals/objectives.

Table 1 presents the results from three other questions that address the fulfillment of academic goals/objectives. Over two-thirds of the students (68%) indicated that they were able to keep up in most of their classes. However, slightly over one-half of these students (53%) indicated that their fall classes were more difficult than they expected them to be, and 69% indicated that it was academically more difficult during the fall term than it was during the CDPSP.

Table 1 also presents the results from two questions which address non-academic program goals/objectives. When the students were asked if they considered themselves members of the BCC community, 80% agreed and only 3% disagreed. And, when asked if their goal was to graduate from BCC, 95% agreed, with less than 1% disagreeing. Responses to these questions point to the fact that most students thought that the CDPSP facilitated their transition to college life. Students, in their written comments, corroborated these findings by stating, "CDPSP has been a very important part in aiding my success at BCC. I have learned to compete at higher levels." "It was a tough adjustment, but I really don't think I could have done it without CDPSP. CDPSP really prepared me for it!"

Preparation Issues

The CDPSP questionnaire also asked students to indicate how CDPSP prepared them to participate effectively in a classroom and to assess their own abilities and attitudes. Questions in this section were constructed as a series of 3 point Likert items from which sub-scales were created and then renamed to reflect their content. For the preparation

section, two-subscales were created -- Classroom Participation Scale, referring to how prepared students are to function effectively in a classroom (e.g., take complete notes, ask questions, understand the content being covered); and an Abilities and Attitudes Scale, referring to how prepared students are to assess their own feelings and interact with others (e.g., assess their strengths and weaknesses, relate to others, manage their time). The Internal Consistency Alphas for the two scales ranged from .73 to .81 and are believed to be reliable and stable measures. Both scales ranged from one to three, with "1" indicating that the student considered himself/herself poorly prepared, "2" indicating that the student considered himself/herself adequately prepared, and "3" indicating that the student considered himself/herself well prepared.

Figure 2 presents the results of students' ratings on the Classroom Participation and Abilities and Attitudes Scales, by ethnicity. On average, students felt CDPSP "adequately" prepared them to participate effectively in a classroom, assess their abilities, and interact with others. For the total population (N=44), the mean rating both in the Classroom Participation Scale was 2.2 and the mean rating on the Abilities and Attitudes Scale was 2.3. African-American students, by far, gave both scales the highest ratings, indicating that they thought the program "adequately-to-well" prepared them to participate effectively in a classroom (2.5), assess their abilities, and interact with others (2.6). The mean ratings given by Hispanic and Asian students, on both scales, averaged 2.1.

Use of Campus Services

The second major section of the questionnaire asked students to indicate how satisfied they were with various campus academic and support services. Students could rate the quality and availability of campus services using a Likert scale that ranged from one-to-five, with a "1" meaning that they were very dissatisfied, a "3" meaning that they were neither dissatisfied nor satisfied, and a "5" meaning that they were very satisfied.

For academic services, students indicated that they were generally "satisfied" with both the availability and quality of the services -- teaching faculty and counselors. Students were also generally satisfied with campus support services such as financial aid, the library and Learning Center. The support services students were most dissatisfied with was tutoring. Nineteen percent of the students reported being dissatisfied with the availability of tutoring.

Academic Success of CDPSP Students

Students' academic performance at BCC after attending CDPSP, is an excellent indicator of how successfully CDPSP prepared students to face the academic challenges and rigors of college life. Figure 3 presents the mean grade point averages (GPA) for the summer, fall, and spring terms of the 1993-1994 academic year. The mean GPA average achieved by students during the CDPSP (summer'93) was 2.64; it fell slightly during the fall term to 2.30, and then increased slightly to 2.37 in the spring term. The mean cumulative grade point average was 2.49, or approximately a C+ average.

Figure 4 presents student grade point averages, by ethnicity. For the summer, fall, and spring sessions), Asian students' performance was the highest, while Hispanic students' performance was the lowest. And, for all three terms, differences between the GPAs' of all three ethnic groups were statistically significant at the $p < .01$ level. During the CDPSP (summer 1993), African-American and Asian students maintained a mean GPA of above 3.0 (African-American 3.22; Asian students, 3.35). Hispanic students maintained a mean GPA of 2.21. Hispanic students showed a decrease in GPA from summer to fall, and a slight increase from fall to spring. African-American and Asian students, on the other hand, showed a decrease in GPA between summer and fall terms and between the fall and spring terms. The cumulative grade point average of students, by ethnicity, revealed that Asian students had the highest GPA (3.19), followed by African-American students (2.87), and then Hispanic students (2.28).

The persistence rates of these students is another indicator of the success of CDPSP. Ninety-three percent (93%) of the CDPSP students continued into their third semester at BCC (fall term, 1994-1995 academic year), clearly indicating that CDPSP is successful at retaining its students. (Four percent (4%) left BCC either during or at the end of the fall term and 2% left BCC either during or after spring term.) These rates compare most favorably to persistence rates for the entire campus, where 83% of all entrants (Fall 1993) continued into their second year at BCC.

When the persistence rate was broken down by cumulative grade point average, students who left during or after fall term maintained a GPA of 1.04, students who left during or after spring term maintained a GPA of 0.80, and students who continued into spring term maintained a GPA of 2.45. Clearly, grades played an important role in a student's decision to persist.

Finally, the last section of the CDPSP questionnaire asked students about their fall term class attendance. When asked how often they attended class sessions, 72% indicated that they attended class 100% or almost 100% of the time, 25% indicated that they attended classes approximately 75% of the time, and only 4% indicated that they attended class sessions approximately 50% of the time or less. A similar pattern was found for all ethnic groups and for males and females.

When Fall class attendance is broken down by cumulative grade point average, see Figure 5, a statistically significant difference was found at the $p < .01$ level. Of those students who attended approximately 100% of the class, no students maintained an "A" average, 47% maintained a "B" average, 47% maintained a "C" average, and only 6% maintained a "D" average. Of those students who attended classes approximately 75% of the time, no students maintained an "A" average, 25% a "B" average, 50% a "C" average, and 25% a "D" average. And, of those students who attended class 50% of the time or less, no students maintained either an "A," "B", or "C" average, while 100% maintained a "D" average. Clearly, a positive association exists between attending class and maintaining a high grade point average.

Conclusions

The results of this study clearly suggest that summer bridge programs for high risk and low-income, minority students like the CDPSP, can help facilitate their transition and adjustment to college life and improve their persistence rates. CDPSP has proven that a strong curricular and counseling component can help teach students how to participate and succeed in an academic environment. In addition, these findings have also shown that summer bridge programs like CDPSP can help minority and low-income students adjust and adapt to college life and become members of the college community.

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Table 1. FULFILLMENT OF ACADEMIC AND NON-ACADEMIC
GOALS AND OBJECTIVES

<u>Statement</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>
I was able to keep up in most of my classes.	11.7%	20.5%	67.8%
		(N=44)	
On average, my fall classes were more difficult than I expected them to be.	23.5%	24.0%	52.6%
		(N=44)	
Academically, I found it more difficult during the fall term than during the summer term.	14.5%	17.1%	68.5%
		(N=44)	
I consider myself a member of the BCC community.	3.0%	17.8%	79.2%
		(N=44)	
My goal is to graduate from BCC.	0.8%	4.2%	95.1%
		(N=44)	

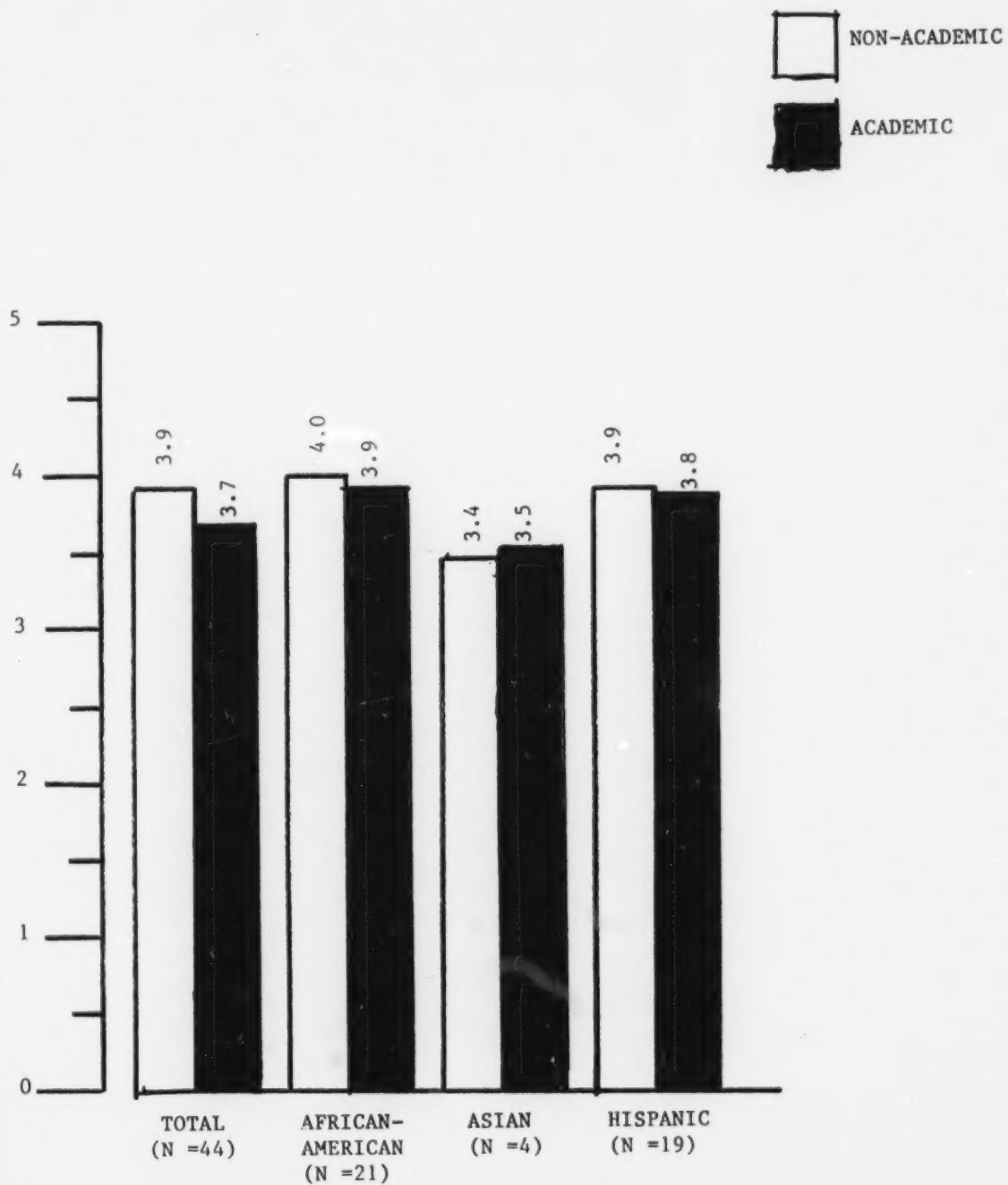


FIGURE 1. FULFILLMENT OF ACADEMIC AND NON-ACADEMIC GOALS AND OBJECTIVES BY ETHNICITY

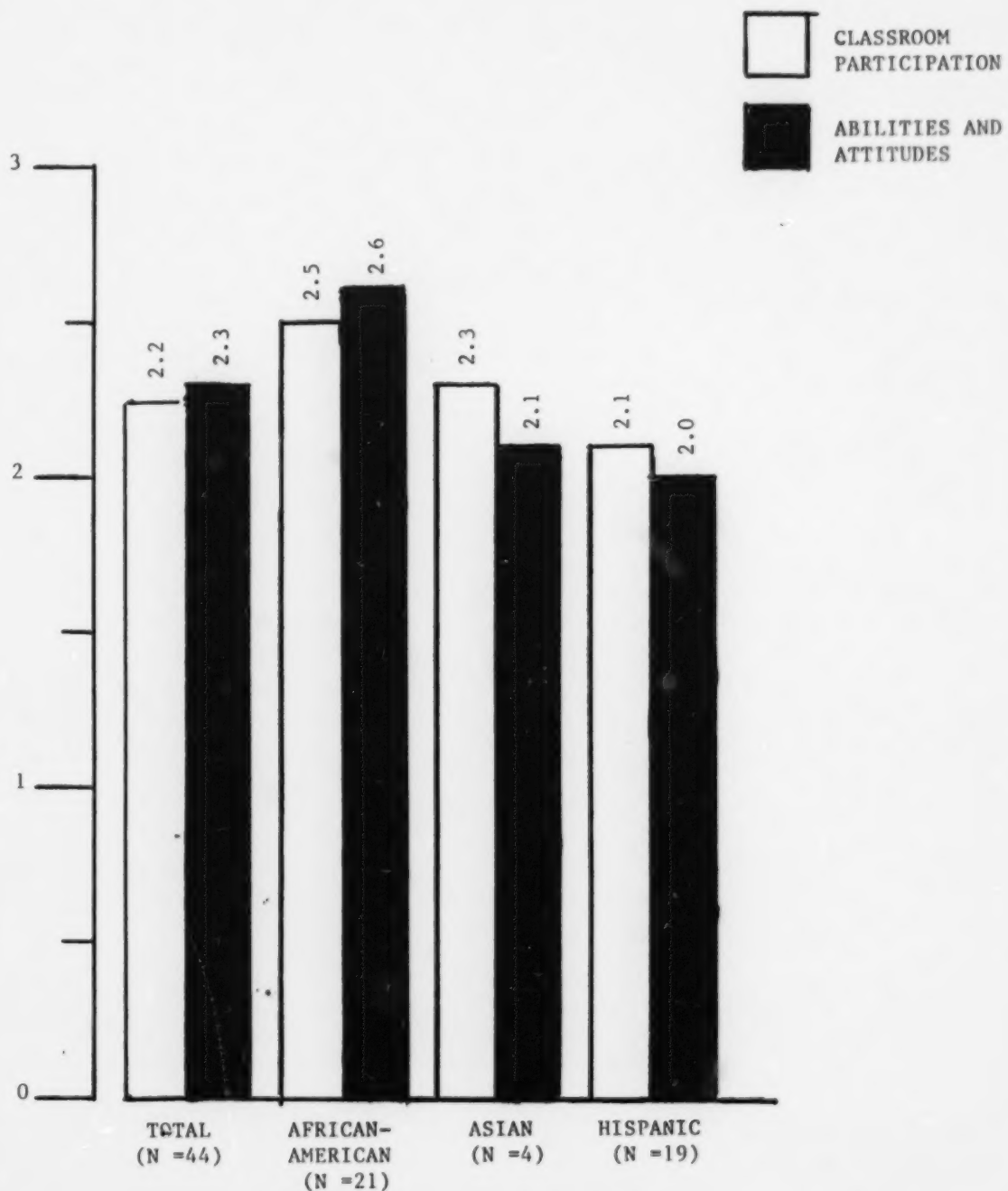


FIGURE 2. PREPARATION SCALES BY ETHNICITY



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

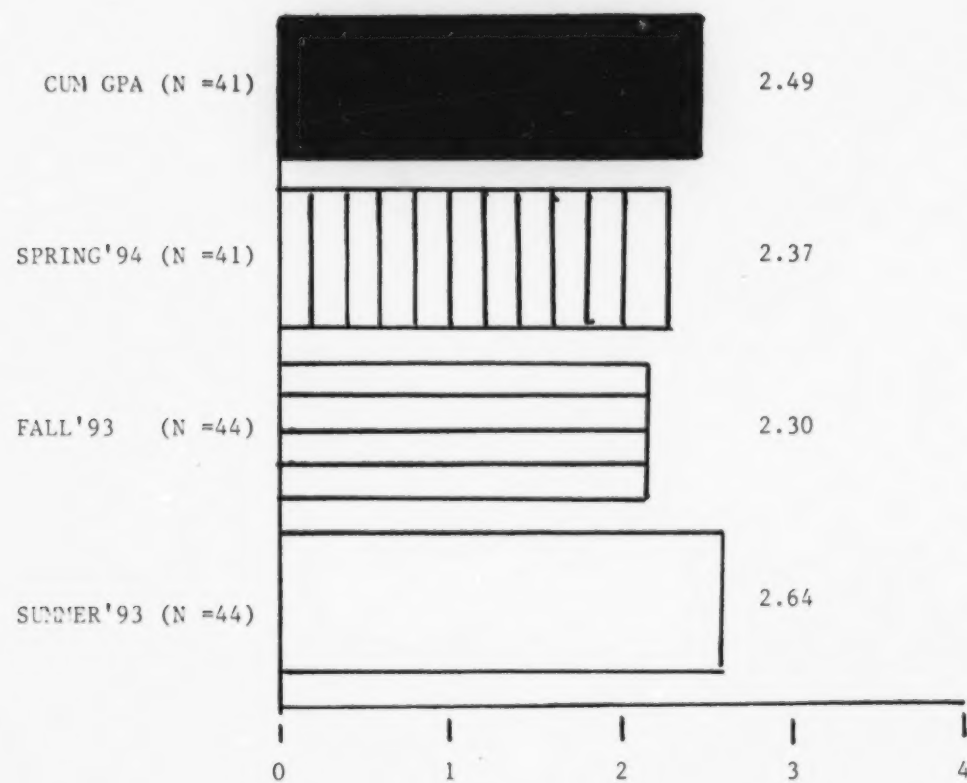


FIGURE 3. GRADE POINT AVERAGE BY TERM



22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

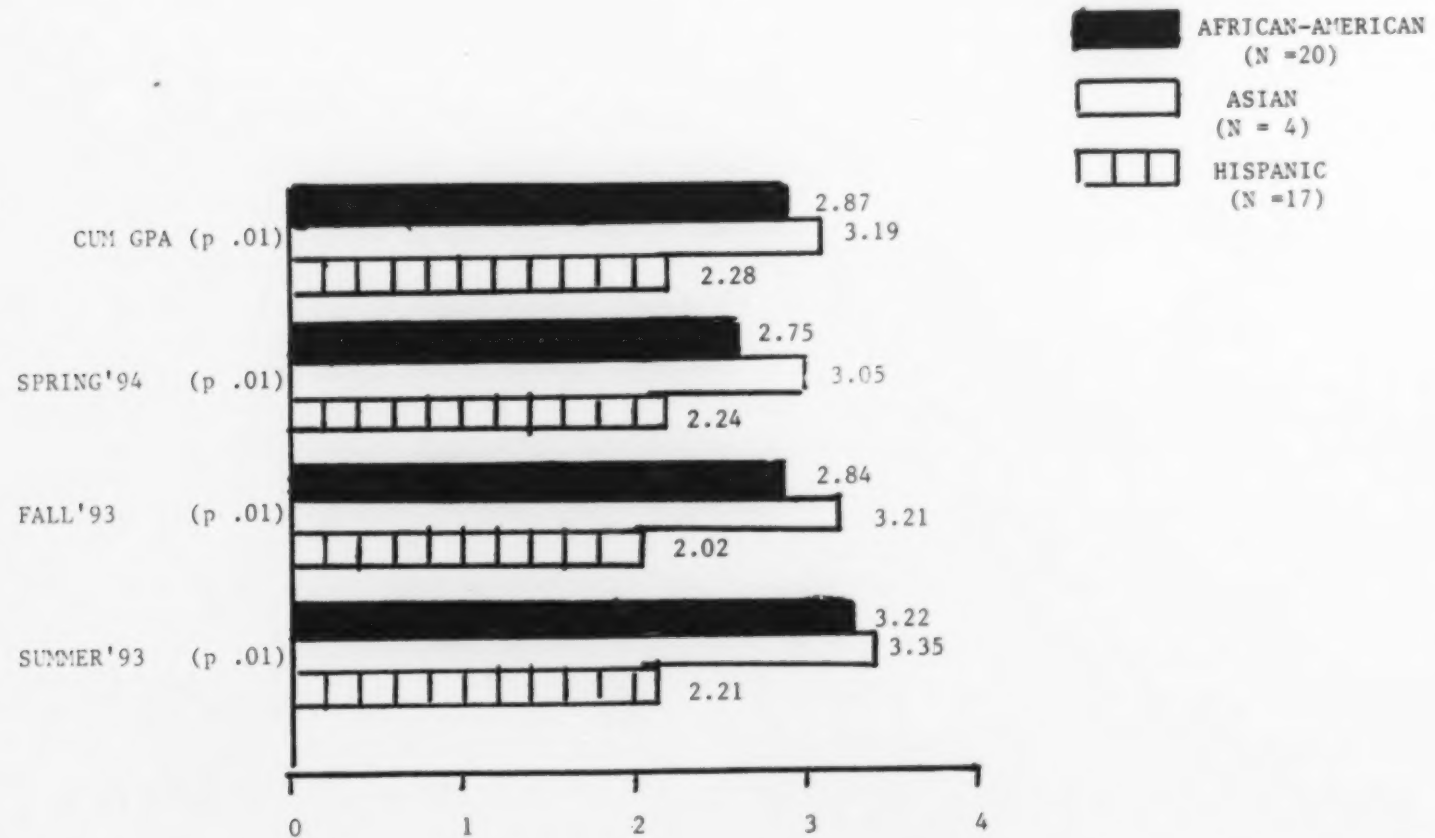


FIGURE 4. GRADE POINT AVERAGES BY ETHNICITY

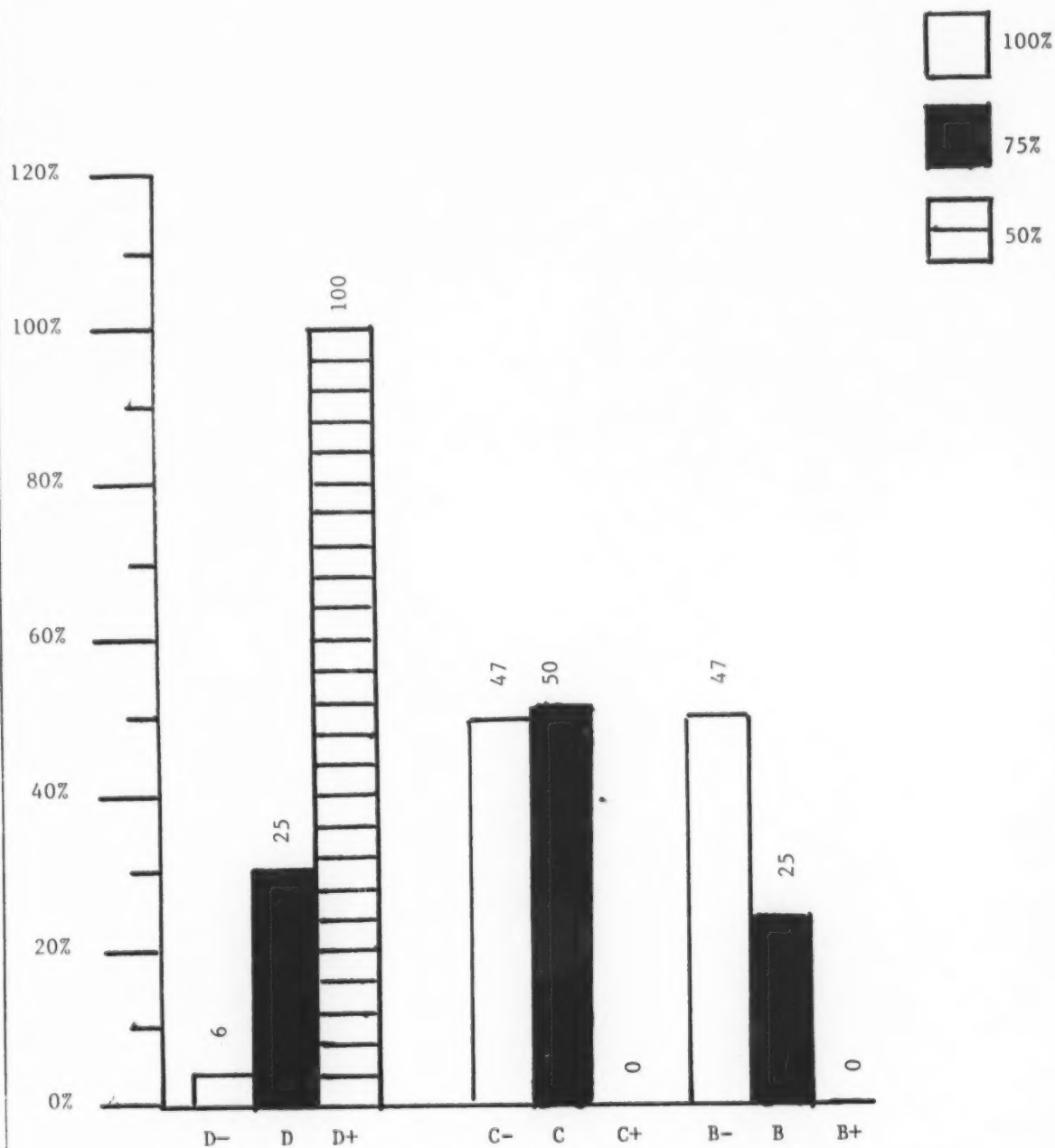


FIGURE 5. CLASS ATTENDANCE BY CUMULATIVE GRADE POINT AVERAGE